



Fax

To:

Board of Patent Appeals
and Interferences
Case 2009-1853

Alexandria, VA
22313-1450

From: Dr. Mitchell Swartz
Weston, MA 02493

**RESPONSE UNDER 37
CFR 1.116**

**EXPEDITED
PROCEDURE**

Fax:

FAX 571 273 0052

Date:

48 (Part 2)
August 27, 2011

Phone:

Pages: 45

(including this page)

Re:

REPLY BRIEF

CC:

**Case Number Redacted
by Examiner Palabrica**

Thank you.

DATED August 26, 2011

Serial No : 09/ 748,691 12/26/2000 Filed: 10/20/2009

THE INFORMATION TRANSMITTED IN THIS ELECTRONIC COMMUNICATION IS INTENDED ONLY FOR THE PERSON OR ENTITY TO WHOM IT IS ADDRESSED AND MAY CONTAIN CONFIDENTIAL AND/OR PRIVILEGED MATERIAL. ANY REVIEW, RETRANSMISSION, DISSEMINATION OR OTHER USE OF OR TAKING OF ANY ACTION IN RELIANCE UPON, THIS INFORMATION BY PERSONS OR ENTITIES OTHER THAN THE INTENDED RECIPIENT IS PROHIBITED. IF YOU RECEIVED THIS INFORMATION IN ERROR, PLEASE CONTACT THE SENDER AND PROPERLY DISPOSE OF THIS INFORMATION.

113. The reports of these products support the incontrovertibility of this new nuclear technology. The Examiner's own witness, Dr. Will demonstrated tritium production ["Reproducible tritium generation in electrochemical cells employing palladium cathodes with high deuterium loading, J. Electroanal. Chem 360 (1993) 161-176; confer also Will 1994]. Swartz (96B) describes several other reports of tritium production. Thus, based upon the above-discussed inadequacies of the art cited by the examiner, and most importantly based upon the growing abundance of "positive" more-recent literature there is evidence of fusion in a material using isotopic fuel.

114. Where is the Examiner's Response to literature supporting the measured products of the cold fusion reaction(s) including excess heat, but other released particles have also been reported {including tritium [Srinivasan, Current Science, 143 (1991); Storms, Fusion Technology, 17, 680 (1990)], sparse neutrons [Gozzi, J. Fusion Energy, 9, 241 (1990); Menlove, J. Fusion Energy, 9, 495 (1990)], helium-4 [Bush, J. Electro. Chem., 304, 271 (1991)], and possibly heavy elements [Matsumoto, Fusion Technology, 20, 323 (1991)]}? Where is the Examiner's Response to Swartz(92), Swartz(94A), Swartz (97A) and Swartz(99), but also Mallove pp246-248, Storms(90,93); Arata(90); Celani(90); Pons(90); Bockris(90); Szpak(91B); McKubre(91); W l(91,93,94), Miles(94C,91,93B,94C); and McKubre, SRI ["Summary During ICCF-7", Infinite Energy, 4, 20, pp.34-35, (1998)]? Where is the Examiner's Response to (Hagelstein 93B), Storms (94C); Huggins 94, Savvatimova (94), McKubre (95), Itoh (95), Biberian (95), and Nobel (95), Kamimura (96), Lonchampt (6), Li (96A), Mizuno (96B), Kamimura (96); Miles (96C), Oriani (96), Claytor (96A), Celani (96B), Swartz 96B, Swartz 96A, Fox 96A, and Rothwell (96)? The vast number of papers in this field corroborates both the "existence" and the "utility" of these teachings.

The Examiners Have Added New Material After FINAL

115. The Examiner states,
"From an a priori point of view, and according to standard theory, negligible fusion reactions are expected under condensed matter conditions in ion-electron systems, as is demonstrated by the standard literature on the required relative velocity of ions to fuse ordained by the Coulomb penetration barrier (see, e.g., D. Bohm, Quantum Theory", pages 271 -280) and the expectation of many orders of magnitude higher temperature before observing significant fusion reactions (see, e.g., Artsimovich, pp. 1-16, especially page 4). "as witnessed, for instance, by Brudanin et al, in a publication in Physics Letters A, volume 146, no. 6, pages 347-350 (April 1990), by D. Morrison, in a "Review of Cold Fusion", Soy. Phys. Usp. 34(12), December 1991, pp. 1055-1060; and by Price et al in "Search for

Energetic-Charged-Particle Emission from Deuterated Ti and Pd Foils", Physical Review Letters 63(18), pp. 1926-1 929 (1989). "

The Applicant thanks the Examiner for the reference which the Applicant has never seen before, however, the Examiner's objection is flawed as there are several problems with the Examiner's arguments.

First, the cited art fails to describe THIS invention.

Second, the Examiner presumes that THIS inventions is the same as used by Drs. Fleischmann and Pons (hereinafter F+P).

Third, the field of cold fusion (also known as LANR, LENR, and CMNS) is real, and some systems such as the above-entitled invention DO have operability and utility.

Fourth, the technology taught by the present invention works, and therefore has operability and utility - and cold fusion is not even needed as discussed above.

Fifth, as the Applicant demonstrated in the original specification there are ways around the coulomb barrier.

Sixth, parts of some of the Applicant's inventions have now appeared in papers by Rossi, and Widom and Larsen, and others and it is not fair for some in the office to give parts of the invention to others who filed AFTER the Applicant for reasons as yet unclear.

Seventh, the "standard theory "does not even mention the lattice, which the Applicant has proven to be important.

Eighth, the publications submitted by the Applicant (and again ignored by the Examiner) also show that growing numbers of the scientific community consider the positive results of cold fusion as being confirmed. That includes DTRA, DARPA, and the US Navy. The ignored submitted Exhibits show widespread replications of cold fusion. They also report other developments in the field including by the Applicant. Where is the Examiner's comment to the hundreds of submitted publications previously submitted, and many now resubmitted, proving that the Office is very wrong? Where is the Examiner's technical response? Why is it that he accepts negative viewpoints immediately, but dismisses each and every opposing viewpoint?

Each of these points has been addressed below (and above).

FACTS SYSTEMATICALLY IGNORED BY THE OFFICE AND EXAMINER

== ERROR BY EXAMINER REGARDING DOE REPORT

116. The Examiner states,

"A Review by the United States Department of Energy in 1989 solidified the conclusion of lack of reproducibility and credibility. ... However, a Report by the United States Department of Energy, entitled "Report of the Review of Low Energy Nuclear Reactions" dated December 1, 2004, 50 pp., and containing 18 reviews by peers in the related fields of physics and chemistry states that "the conclusions reached by the reviewers today are similar to those found in the 1989 review) (see page 5). The reviewers extensively examined low energy nuclear reactions generally, but in particular the one that is the topic of the specification, i.e., deuterium-loaded solids such as palladium and titanium."

The Examiner is inaccurate. First, the evidence (papers and Declarations) demonstrate the existence of lattice assisted nuclear reactions (LANR, also called LENR, cold fusion, and CMNS) and their products (such as helium-4). The problem for the Office is that their previous citations now support LANR. The two decades of positive results, the Declarations, and the peer-reviewed published literature have much more evidentiary value than the few "negative" less credible -- recycled and older -- reports cited by the Examiner about art cut of different cloth than the present invention. Therefore, the subject matter sought to be patented as defined by all pending claims have operability, and resides in a field which does exist and has utility. As the Hagelstein Declaration states,

"Today, D/Pd loading is known to be very important. There have been numerous peer-reviewed published papers that show positive excess heat results in replications of the Fleischmann-Pons experiment. If the USPTO have asserted otherwise, they are simply mistaken."

117. Second, cold fusion is not required for the present invention. On information and belief, it is a 'straw man' argument followed endlessly by the Examiner to keep the Appellant's invention from the American people, as some in the US Patent Office transfer the technology overseas.

118. Third, the Office misstates what the DOE reported - and the Applicant was not there, was asked for, would have liked to have been there, and had just demonstrated his demonstration unit openly at MIT for a week a few months before. The second DOE panel has confirmed cold fusion. In summary,

".....eighteen anonymous DOE reviewers "split approximately evenly" on whether or not there is excess power observed in the cold fusion phenomena. That is a great change since the 1989 ERAB report.

.... more than 3000 scientific papers and hundreds of researchers have expanded the field enormously. Second, in the USA most researchers are self-funded. ...

"Just the fact of the review has heightened the level of discussion. There's been a huge upswing in interest in funding cold fusion research." Adds MIT theorist Peter Hagelstein, "A door has been opened by the reviewers."

[Cold Fusion Times volume 12, number 2]

From DOE report itself:

"DOE Conclusions: Reviewers identified two areas where additional research could address specific issues. One is the investigation of the properties of deuterated metals including possible effects of alloying and dislocations. These studies should take advantage of the modern tools for material characterization. A second area of investigation is the use of state-of-the-art apparatus and techniques to search for fusion events in thin deuterated foils. The reviewers believed that this field would benefit from the peer-review processes associated with proposal submission to agencies and paper submission to archival journals."

[Cold Fusion Times volume 12, number 2]

119. More proof the Examiner is wrong, is from the second DOE report itself, which recommended MORE RESEARCH.

"DOE's Office of Science released a report on December 1st that examined the results of roughly 15 years of experiments dealing with low-temperature nuclear reactions, commonly known as cold fusion. In 1989, researchers B. Stanley Pons and Martin Fleischman announced that a palladium electrochemical cell had generated heat from an unknown source, which they postulated was a low-temperature fusion reaction. Later that year, a review by DOE's Energy Research Advisory Board recommended against establishing DOE programs devoted to the science of cold fusion, but supported the funding of peer-reviewed experiments for further investigations. Since 1989, research programs in cold fusion have been supported by various universities, private industry, and government agencies in several countries. In late 2003, a team of researchers approached DOE and requested another review of the experimental results to date. Their report, submitted to DOE in July, found experimental evidence for a physical effect that produces heat, the production of helium 4 (the product of fusing two nuclei of deuterium, which is a hydrogen nucleus with an added neutron), and the emission of high-energy particles. DOE, in turn, solicited comments from nine scientists, then held a one-day review of the material with another nine scientists. Reviewing the evidence for the production of excess heat and fusion products, two-thirds of DOE's reviewers did not feel the evidence was conclusive. Most reviewers also indicated that the evidence did not conclusively demonstrate the occurrence of cold fusion. In the final analysis, the reviewers were inconclusive about cold fusion's existence, and they recommended specific avenues for new research to resolve the uncertainties in the previous research results."

[Cold Fusion Times volume 12, number 2]

120. More proof the the Examiner is wrong is from Research Day from the US government:

"More CF research needed DoE finds - Since the Department of Energy's last review of cold fusion 15 years ago, significant progress has been made in the sophistication of calorimeters—tools that measure the heat generated by a chemical reaction, change of state, or formation of a solution—yet a new review by the department says the evidence is still uncertain. In late 2003, DoE's Office of Science was asked by a group of scientists to revisit the scientific evidence for low energy nuclear reactions. In total, DoE received comments on cold fusion research from 18 individual scientist reviewers, and two-thirds of them did not feel the evidence was conclusive for low energy nuclear reactions, one found the evidence convincing, and the remainder indicated they were somewhat convinced. Specifically, several reviewers noted that poor experiment design, documentation, background control and other similar issues complicated the results presented. Cold fusion is defined as the theory that energy can be created by running electrical current through water. Above all, the scientists identified a need for further research in the field of low energy nuclear reactions. "The nearly unanimous opinion of the reviewers was that funding agencies should entertain individual, well-designed proposals for experiments that address specific scientific issues relevant to the question of whether or not there is anomalous energy production in Pd/D systems, or whether or not D-D fusion reactions occur at energies on the order of a few eV," the DoE report concludes. "These proposals should meet accepted scientific standards, and undergo the rigors of peer review." In terms of specific basic science research areas that need further elucidation, the reviewers identified material science aspects of deuterated metals using modern characterization techniques, and the study of particles reportedly emitted from deuterated foils using state-of-the-art apparatus and methods. "The reviewers believed that this field would benefit from the peer-review processes associated with proposal submission to agencies and paper submission to archival journals," DoE explains."

[Research Day, reported in Cold Fusion Times volume 12, number 2]

It can be seen again that the Office is wrong.

== ERROR BY EXAMINER REGARDING REPRODUCIBILITY

121. The Office has in the past cited alleged lack of "reproducibility". The Office purports non-"reproducibility" of these phenomena, as a "reason" for rejection. However, there are several errors with this logic and new argument. First, the Examiner's and his cited art's arguments are clouded by the two different meanings of the word(s) "(not) reproducible". In the parlance of the Office, when referring to "cold fusion", the word(s) "(not) reproducible" are a euphemism for "wrong". When used more generally, however, these words can even apply to scientific (and medical) fields which actually do engender respect and/or validity, and where "reproducible" only

refers to the number of samples in a cohort developing the desired effect. The restriction that the Office creates using the word "reproducible" in the present case would obviously create unreasonable hurdles for inventors in such fields as cancer treatment, meteorology, or the sciences of earthquakes, lightning, sunspots, or solar storms.

The Ahern Declaration states,

"In 1987 I was charged with the duty to survey the field of the new superconductors which were at first a great shock to experts in the field. I was selected for this work in part due to my M.S. thesis in the field of low temperature Physics. It is merely coincidental that my thesis topic was based on loading palladium alloys with hydrogen and deuterium and measuring the superconducting transition temperatures. My two year survey concluded that the theoretical underpinnings of superconduction were sadly lacking. The BCS theory was not only incapable of predicting the occurrence of the YBCO materials, it was incapable of making a priori predictions for any arrangement of matter. This observation regarding the lack of understanding in low temperature physics is not widely known. This lack of first principles level of understanding has been of little concern to experimentalists and has not discouraged extensive re-search support."

122. Second, despite the erroneous logic of the office, radiation therapy accounts for the cure of more than 60% of adults afflicted with solid tumors composed of malignant disease, and obtunds the pain in 80% (or more) of patients treated palliatively, there is almost always a clinical effectiveness. Yet it is not possible to know in advance which patients are going to be cured nor is it necessarily reproducible in any single patient. Thus there is clinical proof and utility, despite the lack of reproducibility in any single individual or cohort of patients. Thus, the claim that "reproducibility" must necessarily be absolute for there to be "utility" is also simply not true. Would the Examiner withhold curative treatment of a patient --of their own family member-- because such therapy is not "reproducible"? In summary, if the Office throws out cold fusion patent applications because there is not 100% reproducibility for each experiment, then probably all of the pharmaceutical and biomedical device patents should, for similar reasons, be voided *nunc pro tunc*.

== ERROR BY EXAMINER REGARDING CITED ART, IN GENERAL

123. The cited art supplied by the Office was outdated when it was sent, was never peer-reviewed, is not relevant, and some even has flaws. Such rebutted, stale newspapers and essentially amateur-level reports have poor quality and cannot disprove the evidence the Applicant has presented regarding operability or utility. Several of the Examiner's references are flawed for reasons previously submitted by the Applicant, as discussed by the Applicant in the previous communication. Said so-called "negative" experiment papers from 1990-1991 contain serious errors and their errors are echoed thereafter in the Office's cited art (Huizenga, Taubes, and Jones). Simply put, these experiments were not done well and were contested in the peer-reviewed literature. Lewis, Miskelly, and Hilts have been and remain contested by scientists in published peer-reviewed literature (Miles 94B, Noninski 91, Noninski 93) and other art (Mallove 91, Milton 96). Most of the periodicals and newspapers cited by the examiner involve merely quoting the so-called "negative results" of others, either Alibagli (eg. Hilts) or Lewis et alia (Hilts, Browne), even though they remain validly contested and, therefore, they must be weighed accordingly. Furthermore, the Applicant's inventions surmount the problems so criticized therein, and these issues have been discussed in the applicant's peer-reviewed published papers, and in the Applicant's other patent applications [*vide infra*]. Applicant has already addressed the errors of Huizenga, Jones, Morrison, Miller, etc. previously with solid substantive response, including in Federal Court [A316-317,A321].

124. The applicant respectfully notes that there are many problems with reliance upon newspapers. First, examples of the failure of "headlines" to be fair representative appraisals of new technology include the following:

"... after a few more flashes in the pan, we shall hear very little more of Edison or his electric lamp. Every claim he makes has been tested and proved impracticable."

[New York Times, January 16, 1880]

Second, the paper [from 1989] cited {Stiff} reported possibly negative results in the Wall Street Journal. However recent issues from the very same Journal now report positive results (cf. Bishop). In the New York Times there has been a similar shift in position. The issue of November 17, 1992 {Pollack} demonstrates the reported positive results. See also Freedman (in Science), Dagani (Chemical and Engineering News), Chandler (Boston Globe), Schlesinger, Port, as well.

125. The papers cited by the Examiner are just plain wrong. Even the very newspapers which the Examiner has cited now publish updates which herald that there is increasing acceptance of, interest in, and growth of this field [cf. Freedman (Science 4/24/92), Chandler (Boston Globe 4/17/92)]. As a result, it is reported that scientists are "quite convinced that there is a source of heat" [Prof. Philip Morrison as reported in Chandler] and are "not concerned about the lack of neutrons (expected in a conventional) fusion reaction" [Prof. Louis Smullin as reported in Freedman]. Dagani (1992) now reports that growing numbers of the scientific community do take seriously the "excess heat". See also Chandler, Freedman, Bishop.

126. Several of the papers cited by the examiner are theoretical. Some of these "negative theoretical" citations calculate, using what may be incorrect or false assumptions and approximations, that fusion of isotopic fuel in a material, ie. cold fusion, can not "work" (eg. Ohashi, Cribier, Chapline). This is inaccurate. The applicant respectfully asks the examiner to reconsider, because in actual fact such calculations were historically presented "proving" that heavier-than-air ships (ie. airplanes) "cannot fly". As another example: such calculations only created a virtual "drag" to the innovation of ideas, and their development and implementation, involving airships - which later evolved to include jets and spacecraft.

"Professor Goddard ... does not know the relation of action to reaction ... he only seems to lack the knowledge ladled out daily in our high schools"
[New York Times, January 13, 1920]

127. The Examner is directed to the Office's citation of the NCFI report, and attention is now closely drawn to comments therein.

"Cold fusion work continues in many countries ... The occurrence of nuclear reactions in deuterium-loaded solids, such as palladium and titanium can no longer be reasonably denied. ... Several government laboratories are continuing their work on cold fusion, among them most notably are Los Alamos National Laboratories, The Naval Research Laboratory, The Naval Underwater Systems Command and The Naval Weapons Center. Significant positive results have been obtained in each of these laboratories. ... Over 100 groups from more than 12 countries have now reported on various types of evidence for the occurrence of nuclear reactions in deuterium-loaded metals or compounds."

[F. Will; Final Report National Cold Fusion Inst. (1991)]

NCFI efforts in-house in fact did support the existence of, and significant investment in, the "cold fusion" phenomena. The NCFI Report documented widespread examination of these phenomena.

128. In an attempt to support the unfair rejection, the Examiner cites other art including very less relevant experimental and theoretical papers, and also some columns from periodicals and newspapers. Of said art, most are from 1989. In fact, the cited art failed because they failed to measure loading, which is what the present invention is all about.

As the Hagelstein Declaration states,

"I note that it becomes exponentially more difficult to achieve high D/Pd load-ings above a loading of 0.70 near room temperature (due to the rapid increase in deuterium chemical potential). Hence, the achievement of a loading of 0.95 in the majority of replication experiments in 1989 and 1990, where no special effort was made to achieve high loading, and where the loading was not even measured in most of these experiments cited by the USPTO, would not be expected. The existence of such a requirement was not appreciated in 1989, except by Fleischmann, Pons, and a small number of other researchers."

"The USPTO continues the tradition of assigning significance to these negative experiments, which were not done in the relevant parameter regime of high D/Pd loading. Thus, rather than showing that the Fleischmann-Pons experiment could not be replicated, these insufficiently loaded experiments should be understood as producing the expected negative result (no excess power) in those regimes where we would expect no excess power to be seen."

== ERROR BY EXAMINER REGARDING THE PURPORTED ABSENCE OF EVIDENCE

129. Several of the Office's references cited by the Examiner involve so-called purported "negative" results in that no large numbers of neutrons were observed. However, neutron emission is not expected in large amounts with these reactions (*vide infra*). Because the actual generation of neutrons is so unlikely, the absence of neutrons can not be inferred to indicate the absence of any other reaction or reactions. The absence of neutrons is not the evidence of the absence of fusion of isotopic fuels in a material.

Furthermore, not all of the art cited by the Examiner is "negative" with respect to neutrons as the Office purports. Actual "positive" evidence noted by the Examiner includes Rehn, Shani (who did monitor stimulated neutron radiation from deuterated materials after said deuterated materials were neutron-irradiated), and Faller (who did report a tritium increase). Thus, the Office's art, Rehn, Will, Shani, Faller, and others, cited by the Office, support the existence of the field.

== ERROR BY EXAMINER REGARDING HILTS, ALIBAGLI, MIT

130. The Office has in the past cited Hilts. Applicant respectfully notes that this was discussed extensively in the previous Communication with the Examiner including page 67. The Examiner cites Alibagli whose "report" contains proven fraud as the Examiner ignores the US Navy, the US Air Force, NASA, RLE, the American Nuclear Society. It is inconsistent with Federal requirements of truth and accuracy that the Examiner again relies upon and give authority to papers which now have been shown to have major errors or have proven fraud. Several additional peer-reviewed publications (including Fusion Technology and J. Electroanal. Chem) have exposed many significant flaws in the cited so-called "negative" papers upon which the Office leans on. For example, independent analyses (Noninski, cf. also Mallove) indicate that the experiments of the Massachusetts Institute of Technology [MIT] and Lewis -- despite reported apparently "negative result" may have actually demonstrated excess heat in their experiments which utilized heavy water. Based upon his research, Noninski (93; 91B) has dismissed the references of Lewis, Miskelly, and those which cite early 1989 experiments at MIT's Plasma Fusion Center upon which the Examiner has so staunchly relied.

"Although much discussion was (and is still) devoted to whether ("cold fusion") is connected with any known nuclear reactions, the latter being widely questioned, there is no doubt that the general interest in the problem was provoked by the claim of the possibility of producing excess energy, i.e., energy surmounting the energy break-even value. Unlike the clearly negative indications so far in terms of known nuclear processes taking place, however, careful analysis reveals that the claims in the principal negative papers published so far with respect to the existence of excess energy are in disagreement with the raw experimental data whenever such is presented in those papers. This is very surprising indeed in view of the wide publicity these negative results have been given. An example of an improper analysis of their own experimental data by the authors is Ref. 1 (MIT Plasma Fusion Center Paper, Alibagli et alia), which we have already discussed. (ref. 2) Other examples of inappropriate method and improper interpretation of their own experimental data are (Lewis et alia) and (Miskelly et alia)."

[V. Noninski, Fusion Technology, vol. 23, pages 474-476 (1993).; "NOTES ON TWO PAPERS CLAIMING NO EVIDENCE FOR THE EXISTENCE OF EXCESS ENERGY DURING THE ELECTROLYSIS OF 0.1 M LiOD /D2O WITH PALLADIUM CATHODES"]

131. The Office has in the past cited Alibagli. Applicant's evidence which was timely and repeatedly submitted to the Office [and the Board, including in the Federal Appellate case, including regarding '457 in the Appendix therein at A203-204, A244, A278-A279, A353-355, A367-A370, A391, and especially A368], then Applicant requests and explanation for the violation of USC 1001 because the Office does once again make knowingly disingenuous false statements known to be false a priori [Niehot'f v. Sahagian, 103 A.2d 211 (Me. 1954)]. This is a breach of duty [Rannard v. Lockheed Aircraft Corp., 26 Cal. 2d 149 (1945), 18 U.S.C. §1503]. The Office communication is thus in error [People v. Pierce, 66 Cal. 2d 53 (1967); U.S.v. Price, 86 S. Ct. 1152, 1157, footnote 7; Sawtelle v. Farrell, 70 F.3d 1381, 1387 (1st Cir. 1995); Leasco Data Processing Equip. Corp. v. Maxwell, 468 F.2d 1326 (2d Cir. 1972); Pizarro v. Hotels Concorde Int'l, C.A., 907 F.2d 1256 (1st Cir. 1990); Peckham v. Continental Casualty Ins. Co., 895 F.2d 830, 836 (1st Cir. 1990); Donatelli v. National Hockey League, 893 F.2 459, 465 (1st Cir. 1990)].

132. Furthermore, some of the relied upon references cited by the Examiner are, or quote, "negative" results [eg. Browne, Lewis, Miskelly, Hilts - for example] which have been contested. Attention is drawn to the fact that most of the periodicals and newspapers cited by the examiner involve merely quoting the so-called "negative results" of others, either the Massachusetts Institute of Technology [MIT] (eg. Hilts) or Lewis et alia (Hilts, Browne). Given that the reference articles may be flawed, the additional tabloids referring to such obviously must be weighed accordingly, and are more than balanced by Bishop, Pollack, Schlesinger, Port, Chandler, and Freedman.

== ERROR BY EXAMINER REGARDING BOSCH, BALKE, ROGERS

133. The Office in the past has cited Bosch et al, Balke et al, Fleming et al, Rogers. However, Bosch, who unseriously claims to be the "Bavarian Bubble Bottle Team"), purportedly attempted to repeat the initial F+P experiment. Because the sensitivity of their system is 300 milliwatts (page 165), it is unlikely they would have been able to detect the expected signal with their calorimetry which was circa 65 milliwatts excess heat. Bosch measured neutrons which are not produced (discussed elsewhere). The cited arts have loadings which are insufficient. The Bosch cathode had a loading of less than 0.67, and that did not include correction for other depositions of other materials into or upon the cathode (page 172). This loading is now known to be too low (Swartz 97A) The "negative" results may be, in part, due to inadequate loading (Swartz 07/339,976), and/or the failure to monitor said loading of isotopic fuel (Swartz, (07/371,937**), and/or to activate the loaded quantity of isotopic fuel in various ways (Swartz 07/339,976, Swartz 07/371,937** and Swartz 07/760,970**), and/or to drive

at the right location (Swartz SN 08/406,457 [filed March 20, 1995]. As taught in Swartz 07/339,976, palladium must fill with, and thus physically absorb within it, enough deuterium to obtain the desired reactions.

Balke teaches a less relevant gas system which loaded palladium and titanium. The other references use neutrons. Rogers is a theoretical paper because some of the conclusions in Rogers are not inconsistent with cold fusion. For example, on page 484, Rogers discusses that gamma emission from the excited helium state is not allowed. This is generally correct except at very elevated temperatures (like hot fusion).

== ERROR BY EXAMINER REGARDING SPECIAL RELATIVITY

134. The Office has in the past cited Dick Blue, the Schrodinger equation, and "the time scale for the transition process". Dr. Blue got it wrong, and the Applicant, Dr. Swartz, did fully completely, and accurately correct him in the peer-reviewed journal of the American nuclear society ["Phusons in Nuclear Reactions in Solids", Fusion Technology, 31, 228-236 (1997)]. Dr. Blue appears to have incorrectly derived the Schrodinger equation using "energy" rather than "the uncertainty in the energy". As the Examiner knows, the Schrodinger equation involves the relationship between either the uncertainties of mass and momentum or the uncertainties energy and time. In the case being discussed, the latter was invoked by Dr. Blue. As the Examiner knows, the product of the uncertainties is on the order of the number, called h-bar. Dr. Blue's error directly results from his use of the energy (E) rather than the uncertainty of energy (ΔE). This common error of those without adequate scientific education is discussed in significant detail in the Applicant's published paper "Phusons in Nuclear Reactions in Solids", Fusion Technology, 31, 228-236 (1997). Attention is directed to the section discussing special relativity therein where this matter is definitively and correctly discussed (after peer-review).

== ERROR BY EXAMINER REGARDING BROAD, DAGANI

135. The Examiner has not explained why he unduly relies upon non peer-reviewed periodicals and books which do not discuss Applicant's invention as he ignores the submitted evidence of the Applicant regarding operability or utility.

The Examiner has not explained why he has ignored, and did not discuss, so many of Applicant's arguments in this matter. First, perhaps to promote sales of the newspapers, the Office quotes "headline" events without any substantial data being presented. And it is important to note that some "headlines" are simply wrong.

Second, such "headlines", as opposed to the peer-reviewed articles cited by the Applicant in Fusion Technology, are not fair representative appraisals of new technologies.

Third, this is another case where the Office again takes selected, functionally "old" and out-of-date, biased excerpts to attempt to prove its "point". However, the very newspapers which the Examiner has cited now publish updates which herald that there is increasing acceptance of, interest in, and growth of this field [cf. Freedman (Science 4/24/92), Chandler (Boston Globe 4/17/92)], indicating its maturity even then. As a result, it is reported that scientists are "quite convinced that there is a source of heat" [Prof. Philip Morrison as reported in Chandler] and are "not concerned about the lack of neutrons (expected in a conventional) fusion reaction" [Prof. Louis Smullin as reported in Freedman]. Dagani (1992) now reports that growing numbers of the scientific community do take seriously the "excess heat". See also Chandler, Freedman, Bishop.

136. Fourth, the Office cites old (~1991) articles, but there are many periodicals -- more recent -- which do support this field including the Wall Street Journal (Bishop (92); Bishop (93), Bishop (96)), New York Times (November 17, 1992, Pollack, and especially Clarke 1997). There are many periodicals which do support this field including the Wall Street Journal (Bishop (92); Bishop (93), Bishop (96)), New York Times (November 17, 1992, Pollack, and especially Clarke 1997). The Examiner should note that the Applicant has now supplemented these with even more references.

137. The Examiner has not explained why he unduly relies upon irrelevant papers which are totally theoretical. Some of these "negative theoretical" citations calculate, using what may be incorrect or false assumptions and approximations, that fusion of isotopic fuel in a material, ie. cold fusion, can not "work" (eg. Ohashi, Cribier, Chapline). The applicant respectfully asks the examiner to reconsider, because in actual fact such calculations were historically presented "proving" that heavier-than-air ships (ie. airplanes) "cannot fly". As another example: such calculations only created a virtual "drag" to the innovation of ideas, and their development and implementation, involving airships - which later evolved to include jets and spacecraft.

"Professor Goddard ... does not know the relation of action to reaction ... he only seems to lack the knowledge ladled out daily in our high schools"
[New York Times, January 13, 1920]

"... after a few more flashes in the pan, we shall hear very little more of Edison or his electric lamp. Every claim he makes has been tested and proved impracticable."
[New York Times, January 16, 1880]

== ERROR BY EXAMINER REGARDING FLEMMING

138. The Office has in the past cited Fleming and other papers where the loading times are too short. For example, Fleming some were half a day, the longest was 5 days. Without the codepositional techniques taught in the original specification and claims of the above-entitled application, the times are weeks to achieve the desired reactions. Furthermore, the loadings were insufficient. Fleming only had a loading estimated at 0.75 (page 521). This loading is now known to be too low (Swartz 97A).

== ERROR BY EXAMINER REGARDING HARWELL

139. The Office has cited Harwell. This program is believed to be one of the most comprehensive worldwide with as many as 30 cells operating at a time and over 100 different experiments performed. However, was there no evidence of any excess heat generated in any of the Harwell cells? Harwell had flawed analysis, and as the Examiner knows, but ignores and fails to comment upon, was shown by the U.S. Navy, upon close analysis, to have had positive results in Cell 3. Melich and Hansen (Melich 93) have reported that:

"In Harwell's D2O Cell 3 there are more than ten time intervals where an unexplained power source or energy storage mechanism may be operating. *Harwell Cells 1,2,3 and 4 were wired in series to a constant current source. *** Throughout these anomalous increases in temperature in Cell 3, Cell 4 behaves "normally", i.e., it suffers no unexplained pulses of energy. Our initial estimate of the power associated with these anomalous temperature increases is 100-200 mW."**

{Melich, M.E., Hansen, W.N., "Some Lessons from 3 Years of Electrochemical Calorimetry", in ICCF-3 Frontiers of Cold Fusion", Academy Press (1993)]

Thus, Harwell's cell 3 supports the characterization of "positive results".

== ERROR BY EXAMINER REGARDING HUIZENGA

140. The Office has cited Huizenga, while ignoring that he is focused on sales of his old inaccurate book. First, the book has nothing to do with the present invention. Second, the book is not up-to-date with respect to cold fusion, nor is it accurate. Most importantly, this book focuses on a few mistakes of a few individuals from 1989, and does not reflect either the science or engineering of the field in general today, or the present invention specifically. Third, Huizenga's book and its unsubstantiated and inaccurate statements and claims have been criticized by many including Mallove (94; see also his Declarations). Dr. Huizenga would pass off the entire field as "pathological science", but given that he fails to read the literature, or respond to the issues in his book, his entire premise must be examined. Dr. Eugene Mallove, historian and

scientist, has made some compelling comments about this phrase used against those in the field of cold fusion

"Pathological science" became the common insult, as few noticed that pathological skepticism about a new phenomenon was the real problem. Contrary to the media's perception, cold fusion never died and was certainly never disproved; it simply went underground as groups of courageous scientists in over a dozen countries mounted a concerted effort to understand and reproduce the mysterious phenomenon. Thanks to their hard work, it has survived."

[Mallove, "COLD FUSION", May 1994 issue, vol. 1, number 1]

141. Fourth, attention is drawn to the simple fact that no "Epilogue" by one writer can refute the copious -- and continually growing -- positive data which exists for cold fusion. Many attendees at the ICCF-4 meeting in Maui (including the Applicant) watched a tired Dr. Huizenga sleep on a couch in the hotel during said Conference; even as three (3) simultaneous meetings were going on at that time. Dr. Huizenga appeared tired and worn, woke up later, after missing a number of meetings, and reported that there was "nothing new". Dr. Huizenga is entitled to his inaccurate opinion, but the Office must rely on those, skilled in the art, that actually attend the Evidence.

142. Fifth, Huizenga's book relies on theories against cold fusion because of the unusual (compared with hot fusion) branching ratio. Some of these "negative theoretical" citations by the examiner calculate, using what may be incorrect or false assumptions and approximations, that fusion of isotopic fuel in a material, i.e. cold fusion, can not "work" (e.g. Ohashi, Cribier, Chapline). There exist other theoretical papers which may explain the observed cold fusion phenomena (e.g. Hagelstein 90, 91, 1993A, 94; Takahashi (91), Swartz 1992, 94A, 96B, 97A, 97B; McNally 89; Hora 93; Johnson 94; Mills 94; Mills 95; Li 95; Kim 90, 94A, 94B, 95, 96; Matsumoto 89; Chubb 90, 91, 94A, 94B; Szpak 91; Tajima (90); Schneider 89; Rice 90, Zhu 90, and Bush 91A). These theories involve loading, material destruction, and nuclear reactions including tunneling, screening, and many other issues. These papers reflect solid research and support the existence of the field but are ignored by the Office. The applicant respectfully asks the Board to reconsider, because in actual fact such calculations were historically presented "proving" that heavier-than-air ships (i.e. airplanes) "cannot fly". Such calculations only created a virtual "drag" to the innovation of ideas, and their development and implementation, involving said airships - which later evolved to include jet planes and spacecraft.

"Professor Goddard ... does not know the relation of action to reaction ... he only seems to lack the knowledge ladled out daily in our high schools"

[New York Times, January 13, 1920]

== ERROR BY EXAMINER REGARDING JONES

143. The Office has in the past cited Jones and Dagani. The citation of Dr. Jones is not relevant and is immaterial. It is interesting to watch Jones take both sides (see Taubes). and also publish the "positive" results in this field (Jones 89, Jones 90, Menlove and Jones et alia in Menlove 90B).

First, the Examiner should admit that Jones' positive work has been cited in issued US Patents including Czirr 5,231,290.

Second, the Examiner must accept that Jones now does again report neutron emission from these systems, as was presented this year at the APS meeting and then reported on in the Cold Fusion Times (Winter 2003 issue). The fact remain that Jones' experiment work now supports cold fusion.

144. The Office has cited,

"Jones et al in J. Phys. Chem, vol. 99, (1995) set forth reasons why the alleged obtainment of excess heat in cold fusion systems, can not be relied on as valid."

THE TRUTH - - THE EXAMINER Errs on Jones' Errors already discussed

The Examiner cites Jones' claims, but the Examiner egregiously ignores that the Applicant has already submitted contradicting un rebutted evidence and discussed that evidence including the errors in Jones explained with solid substantive response [A205,A251-A252,A291-292,A322; also A65,A70] including Jones' significant errors (Miles 93A, Miles 94A, 96A, Cravens 96, Tinsley 97). Dr. Miles, as just one example, discusses in great and sufficient detail said errors contained in the Jones papers in his 20 May 1998 to Mr. Dagani, Senior Editor, Chemical and Engineering News

"Enclosed is a reprint of my recently published reply to Jones-Hansen [J. Phys. Chem. B. 102, 3642 (1998)]. It was a long and difficult battle for me to have the opportunity to reply to the vicious attack of my work by the Jones-Hansen paper [J. Phys. Chem., 99, 6966 (1995)]. In my opinion, their paper contained many distortions and errors concerning my publications rather than the reasonable scientific dialogue that is so badly needed for this field.. ... Although critics like S.E. Jones and others have made it nearly impossible to obtain government funding for cold fusion, this research continues in many laboratories around the world. Unlike Jones and his 1989 report of cold fusion neutrons, I find no reason to retract any of my cold fusion claims. The recombination of deuterium and oxygen gases does not explain my excess heat measurements, and atmospheric contaminations do not explain my correlations between the excess power measured and the helium-4 produced in the experiments."

**[Dr. Melvin H. Miles NAWCWPNS Fellow, DEPARTMENT OF THE NAVY
NAVAL AIR WARFARE CENTER WEAPONS DIVISION]**

In addition, it is important to note that in addition to said errors, Jones has other significant errors as well which are not discussed in these cited references. For example, in Jones (95), the discussions of heat rate, thermoneutral potential, and input power are incorrect, and furthermore are not applicable to the present application and invention, as discussed in Swartz (96E) and Swartz (95, 97B).

== ERROR BY EXAMINER REGARDING JAPAN

145. The Office has in the past cited other countries such as Japan to demean CF. That is so wrong. First, Japan is made of many individuals and institutions, many of which continue cold fusion studies, and who disagree with the hearsay Office claim, as they diligently continue to publish, including [and each of which prove the Examiner and his cited art incorrect]: Arapi, Alban, Faculty of Engineering, Iwate University, Japan, Experimental Observation of New Element Production in the Deuteride and/or Hydride Palladium Electrodes Exposed to the Low Energy DC Glow-Discharge, COLD FUSION TIMES, Volume 10, Number 1, 2003; Arata, Achievement of Solid-State Plasma Fusion, Cold Fusion Times Fall 1997; Asami, T. Senjuh, T. Uehara, M. Sumi, H. Kamimura, S. Miyashita and K. Matsui R&D Center for New Hydrogen Energy, The Institute of Applied Energy 14-2, Nishishinbashi 1-chome, Minato-ku, Tokyo 105, Japan, MATERIAL BEHAVIOR OF HIGHLY DEUTERATED PALLADIUM, The Seventh International Conference on Cold Fusion. 1998; IWAMURA, Yasuhiro, Takehiko ITOH, Mitsuru SAKANO and Satoshi SAKAI, OBSERVATION OF LOW ENERGY NUCLEAR REACTIONS INDUCED BY D₂ GAS PERMEATION THROUGH PD COMPLEXES, The Ninth International Conference on Cold Fusion. 2002. Beijing, China: Tsinghua University.; IWAMURA, Yasuhiro, Mitsuru SAKANO and Takehiko ITOH, Advanced Technology Research Center, Mitsubishi Heavy Industries Ltd., 1-8-1, Sachiura, Kanazawa-ku, Yokohama 236-8515, Japan, Elemental Analysis of Pd Complexes: Effects of D₂ Gas, Jpn. J. Appl. Phys. Vol. 41 (2002) pp. 4642-4650, Part 1, No. 7A, July 2002; IWAMURA, Takehiko ITOH, Nobuaki GOTOH, Mitsuru SAKANO, Ichiro TOYODA and Hiroshi SAKATA, DETECTION OF ANOMALOUS ELEMENTS, X-RAY AND EXCESS HEAT INDUCED BY CONTINUOUS DIFFUSION OF DEUTERIUM THROUGH MULTILAYER CATHODE (Pd/CaO/Pd), The Seventh International Conference on Cold Fusion. 1998. Vancouver, Canada.; ENECO, Inc., Salt Lake City, UT. : p. 167, J. Kasagi, H. Yuki, T. Itoh, N. Kasajima, T. Ohtsuki and A. G. Lipson, ANOMALOUSLY ENHANCED D(d,p)T REACTION IN Pd AND PdO OBSERVED AT VERY LOW BOMBARDING ENERGIES, Seventh International Conference on Cold Fusion. 1998. Vancouver, Canada.; ENECO, Inc., Salt Lake City, Matsumoto, Takasaki, Hokkaido Univ, Japan, Generating Carbon Tubes and Films from Lead and

Cadmium Wires During Underwater Spark Discharges, TRANS. AMERICAN NUCLEAR SOCIETY, LOW-ENERGY NUCLEAR REACTIONS (2000), MIZUNO, Tadahiko, Tadayoshi OHMORI 1, Kazuhisa AZUMI, Tadashi AKIMOTO and Akito TAKAHASHI, Confirmation of heat generation and anomalous element caused; Mizuno, Tadahiko Tadayoshi Ohmori, Tadashi Akimoto, Hokkaido Univ, Japan, , Akito Takahashi, Osaka Univ, Japan, Neutronics, Heat and Products Induced by Plasma Electrolysis, TRANS. AMERICAN NUCLEAR SOCIETY, LOW-ENERGY NUCLEAR REACTIONS (2000), Mizuno, Tadahiko, Experimental Confirmation of the Nuclear Reaction at Low Energy Caused by Electrolysis in the Electrolyte, Proceedings for the Symposium on Advanced Research in Energy Technology 2000, Hokkaido University, March 15, 16 and 17, 2000, pp. 95-106., Mizuno, Anomalous Isotopic Distribution after electrolysis, Cold Fusion Times Fall 1996, Mizuno, Tadahiko, Nuclear Transmutation: The Reality of Cold Fusion, Department of Nuclear Engineering Hokkaido National University, Japan, Mizuno, Tadahiko, Tadayoshi Ohmori, Tadashi Akimoto and Akito Takahashi, Production of Heat during Plasma Electrolysis in Liquid, Jpn. J. Appl. Phys. Vol.39 (2000), Mizuno, Tadashi Akimoto, Tadayoshi Ohmori 1, Akito Takahashi, RELATION BETWEEN NEUTRON EVOLUTION AND DEUTERIUM PERMEATION WITH A PALLADIUM ELECTRODE, The Ninth International Conference on Cold Fusion. 2002. Beijing, China: Tsinghua University., Takahashi, Akito Masayuki Ohta, Osaka Univ, Japan, , Tadahiko Mizuno, Hokkaido Univ, Japan, Radiation-Less Fission Products by Selective Channel Low-Energy Photofission, TRANS. AMERICAN NUCLEAR SOCIETY, LOW-ENERGY NUCLEAR REACTIONS (2000).

Second, the Examiner's disingenuous statement is indelibly rebutted by said Japanese efforts including Mitsubishi's recent paper on cold fusion in China at the 9th International Cold Fusion meeting on 4/02 (*supra*).

Third, groups in Japan are simply not relevant to the present application.

Fourth, if the cited groups had followed the present original specification they would have succeeded.

The Examiner, trying to undermine US security and the US Constitution is directed to additional CF confirmations which have been made by the Japanese [Mizuno (December 1993); Yamaguchi 90].

"The cold fusion phenomena were tested with use of proton conductor solid electrolyte plates maintained at 300~400 deg C. An anomalous level of excess heat evolution of the order of 100 watt cm⁻² was observed during absorption/desorption cycles of deuterium-containing hydrogen gas under

application of an alternate electric field. **** Samples were made from a mixture of SrCO_3 , CeO_2 , Y_2O_3 and Nb_2O_3 powders. **** The heat generation from the proton conductor in the experiment of deuterium-containing hydrogen gas was estimated to be approximately 50 watt (~ 100 watt cm^{-2}) over 20 hrs, or ~ 3.6 MJ in total. The input power given to the sample was +18 V, ± 40 (micro) A, or 7.2×10^{-4} watt. Accordingly, the output-to-input power ratio was estimated to be as large as 7×10^4 ."

["Anomalous Heat Evolution from SrCeO_3 -Type Proton Conductors during Absorption/Desorption of Deuterium in Alternate Electric Field"; Tadahiko Mizuno, Michio Enyo, Tadashi Akimoto and Kazuhisa Azumi Hokkaido Univ., Sapporo, Japan (ICCF-4, December 1993)]

146. Despite the incorrect statements by the Examiner, similar confirmations of cold fusion and continued efforts have been made by the Chinese [Jin (December 1993); Li (95, 96A, 96B, 97), Jin (93, 94)].

"The experimental studies of YBCO-D system indicated that YBCO high temperature super-conductor (HTSC) was shown to have a similar effect on deuterium absorbability and anomalous nuclear effect like palladium(1). We found that $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_{7-d}$ could absorb deuterium at normal temperature and forms $\text{D}_x\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_{7-d}$. We also found that the deuterated YBCO could produce high energy charged particles far larger than background. The influence of the absorbed deuterium on the characteristic of YBCO HTSC and the mechanism of the anomalous nuclear effect are not clear and needed to be further studied."

["DEUTERIUM ABSORBABILITY AND ANOMALOUS NUCLEAR EFFECT OF YBCO HIGH TEMPERATURE SUPER-CONDUCTOR"; JIN Shang-xian, ZHAN Fu-xiang and LIU Yu-zhen, en Beijing, PRC (ICCF-4, December 1993)]

147. Also inconsistent with the Office's opinion and attempt to hurt the United States and its citizens, are Russia's reports also confirming cold fusion. For example, Kucherov (1993) has confirmed the cold fusion phenomena in the gas glow discharge system.

"The results of four years of experimental work on glow discharge in deuterium with cathodes made of palladium and other materials are presented. About 500 experiments were made. ****. Neutron spectra showed neutron energies up to 17MeV with anomalous shift to high energies (five orders) relative to d-d reaction. .. Gamma-spectrometry showed low level radioactive isotopes formation. Together with half - life time measurements it allowed to identify some of the isotopes, such as Rh and Sr isotopes. Most of the lines (~ 100) are still unidentified. Non-background gamma-lines sometimes can be seen for few days. Most of the gamma-lines appear in lower than 300KeV region. X-ray films outside the chamber with led screens show some beam-like spots with energy 100-200 KeV. Charged particles registration with SSB and CR-39 detectors showed good correlation of the results obtained by these methods. Maximal observed fluxes of charged

particles were $\sim 10^6 \text{S-1}$. ***** X-ray film with lead screens showed X-ray fluxes up to 10gs.] with soft ($<1\text{KeV}$) and hard (10-30KeV) components. Sometimes characteristic X-rays of palladium can be seen with Ge-Li detector."

["Calorimetric and Nuclear Products Measurements at Glow Discharge in Deuterium"; Yan KUCHEROV, Alexander KARABUT, Irina SAVVATIMOVA Scientific industrial Association "Luch", Podolsk, Moscow Region, Russian Federation (1993)]

148. Thus, there is growing evidence that the Office's opinion that cold fusion "does not exist" is incorrect, but is only made to usurp the United States Constitution, Congressional directive, law, custom, and Applicant's rights. Said evidence includes reports of the progress of cold fusion reveal a real scientific field in Japan, India, Russia, England and France ["Cold Fusion in Japan", Rothwell, *COLD FUSION TIMES*, v. 1, issue 3, page 1, 7, 9, (1993) and "COLD FUSION IMPACT - GLOBAL RESPONSE:", Fox, *COLD FUSION TIMES*, vol. 1, issue 2, p. 2, 5 (1993), Mallove, "COLD FUSION", May 1994 issue, vol 1 number 1]. The Examiner should consider "Why there?" The answer is this. Research has flourished mainly in those countries (Lonchampt 96) where patents issue.

As stated in the unrebutted Declaration of Mr. Fox,

"Few other countries have denied cold fusion inventors the rights to the fruits of their ingenuity. The most telling evidence is the fact that scores of patents on cold fusion have issued in other countries (over one-third of all patents issued have been to Japanese inventors and assignees). By contrast almost no patents on cold nuclear fusion have been granted by the U.S. Patent Office"

[Declaration of Hal Fox]

Therefore, the Applicant respectfully requests that the Examiner respond substantively and honestly to Applicant's submitted evidence about Japan, and then finally, tardively, admit the Office's lack of accuracy. Work on cold fusion began in Japan before World War II and continues to this day. The US is now 23 years behind other countries because of the US Patent Office denies allowing valid patents to issue, thereby systematically ignoring both Constitutional and Congressional directive. On information and belief, it appears that some involved with the Examiner and Office have transfered some of this technology overseas based upon the appearance of unpublished technology. There is a name for what some in the USPTO have done.

== ERROR BY EXAMINER REGARDING MERRIMAN

149. The Office has in the past cited Dr. Barry Merriman. Dr. Merriman has made several comments about Dr. Swartz. One of those comments is in the last page of the Examiner's cited art. The Examiner cites a paper by Dr. Barry Merriman, entitled "An

attempted replication of the CETI cold fusion experiment". In the paper, Merriman attempts to reproduce an experiment of someone other than the Applicant, and of a system other than the present application or any of the other applications of the Applicant. Therefore, Merriman is not relevant. Most importantly, it is presumed that the reason that the Office cited this paper is because Dr. Merriman cites the Applicant, Dr. Swartz, on page 17, of 17. On that page, although Dr. Merriman is critical of many people in their efforts stating that they are "neutral -- to wildly optimistic", but of the Applicant of the above-entitled invention, Dr. Merriman states,

"Dr. Mitchell Swartz is cold fusion times is unabashedly pro -- CF, but serious, scientifically oriented online magazine."

With that complement by the offices witness supplementing the un rebutted Declarations and the copious un rebutted peer-reviewed publications and other Exhibits, the Applicant now hopes the Examiner will reconsider and issue this patent.

— ERROR BY EXAMINER REGARDING MILLER and BASS

150. The Office has in the past cited a MEMO (dated 10/9/97) from Bennett Miller to Dr. Robert W. Bass. There are several problems with this citation. First, Miller does not discuss this invention or ANY of Applicant's work (published and/or unpublished). It is therefore not relevant. Miller is admittedly INCONCLUSIVE. Miller states that "it can be argued that the tests were inconclusive for a number of reasons".

Second, Miller is technically inaccurate about cold fusion situation in Japan. Miller confuses the Toyoda/IMRA effort (with F+P in Sophia Antipolis) with the IAE-NHE Laboratory (Shin Sapporo) which was under the aegis of MITI/NEDO and was officially "closed" after 3.5 years of an intended 3 year effort.

In fact, Japan pursued cold fusion before World War II (*Cold Fusion Times*, enclosed herein), and its efforts continue (*supra*).

Third, Miller suggests the use of peer-review. As discussed in the Verner Declaration, the Applicant has done just that,

"I have witnessed Dr. Swartz operate his equipment in front of visitors to the laboratory including Professors Louis Smullin and Keith Johnson from MIT and others."

Applicant has submitted more than 40 peer-reviewed papers and that is abiding by the process, as the Examiner surely would agree. What could be more compliant with Miller's suggestions than that?

Fourth, discussion of errors in Miller, was previously made with solid substantive response [e.g. in the Federal Appendix A316-317, A321]. Where is the Examiner's response?

Fifth, it appears that Miller was also against solar-cell technology in the '70s and therefore has a history of opposing alternative energy sources (like solar cells), and his opinion must be further discounted accordingly.

== ERROR BY EXAMINER REGARDING MORRISON

151. There are several problems with the Office's reliance upon the late Douglas Morrison. First, the criticism now cited by the Office in new argument has been addressed elsewhere (and shown to be wrong). Specifically, the *COLD FUSION TIMES* (pages 1, 2, 6, 8, 10-11) volume 1, issue 3 (1993) included an update by Drs. Fleischmann and Pons who have responded in great detail to said "criticism" of their work ["Response to Critique of Physics Letters A Paper", *COLD FUSION TIMES* (pages 1,2, 6, 8, 10-11) volume 1, issue 3 (1993)].

Second, discussion of the errors in Morrison was previously made by the Applicant with solid substantive response [A252-253,A292-A293,A323 in the Federal case] and conveniently ignored by the Examiner.

Third, Morrison, previously a serious worker in hot fusion community (CERN), deviated and then widely lectured on subjects such as unidentified flying objects (UFOs) and the Loch Ness monster. He tried to relate them to the more serious serious well-credentialled scientists in the field of cold fusion. To do so, Douglas Morrison preached his own elitist dictum based upon his "view" of science being "superior" in certain locations. Morrison implied that "good" science can only be done by a handful of "good" research institutes which are all located only in Northern Europe and the Northeastern United States. Morrison stated that other people located in Southern Europe, Asia, and Southern U.S. --and who perform research there-- are inferior scientists, who can only produce at best marginal, "bad," inconsequential, science or as he puts it "pathological" science. As proof, the following excerpt is from the Office's reference, taken from the video transcript cited by the Office.

"A disturbing pattern emerged in cold fusion experiments. Labs at high prestige universities generally got negative results. Elsewhere results were often positive." [World map is displayed with this voice-over, then Mr. Morrison speaks on camera]: 'I was absolutely astonished when I took northern Europe -- northwestern Europe. All the results were, no, no, no, no -- they couldn't find it. And when I took southern Europe it was all yes, yes, yes. And when I took eastern Europe it was all yes, yes, yes. The United States divided into two parts. If you took the major laboratories and what I call the greater region of The New York Times -- where it was read very much -- it was no, no, no. If you took the remainder of the United States -- the southern part of the United States, it was yes, yes, yes.... This rather horrified me.' "

[Morrison, 1991, cited by the Office]

This is called the Morrison "Regionalization of Results" theory [1990 "Review of Cold Fusion"]. His detractors point out that this is tantamount to "Aryan Science Numerology" because by whatever name for this scheme, this Aryan/Regionalization theory has nothing to do with either science or the above-entitled application, but involves elements of "hate crime". Like most elitists, Morrison did not hide his opinions. By attacking scientists' results based upon where their laboratory was located makes Morrison's -- and the Office's {since they cite him} -- prejudices quite clear. It is wrong for the Office to again endorse this, and thereby align the United States of America with such salient discrimination, hate crime, and prejudice. However, it does seem that discrimination is in vogue at the USPTO.

== ERROR BY EXAMINER REGARDING NEUTRONS

152. The Office has in the past cited the absence of neutrons in LANR. Fusion of isotopic fuel in a material does not usually produce significant numbers of neutrons external to said material. Therefore, many of the so-called putative "negative" results do not negate anything at all because the absence of neutrons is not the evidence of the absence of fusion of isotopic fuels in a material [eg. Williams, Kreysa, Ziegler, Hajdas, Faller, Alber, and Lewis]. Furthermore, the actual generation of neutrons although unlikely is discussed in the Examiner's cited work. These positive results include Shani, who monitored stimulated neutron radiation from deuterated materials after said deuterated materials were neutron-irradiated. Also Jones. In fact there have been many reports of low level neutrons from these systems (Gozzi 92; Wolf 90; Arata (90); Menlove 90A, 90B, Takahashi 91, Scott (90); De Nino (89); Yamaguchi (90); and Mallove (see *Fire from Ice*).

== ERROR BY EXAMINER REGARDING NOVA

153. The Office has in the past cited the "ancient" NOVA tape. The applicant discussed the videos in the previous communication to the Examiner. Where are the Examiner's substantive responses to the previous submitted response by the Applicant?

The Examiner has ignored that the Office cited the NOVA video before repeatedly, and each time the Applicant responded with three (3) videos [CBC (1993), CBC (1994); BBC (1994)] on May 26, 1997 and November 8, 1997. The Examiner should examine the three (3) videos which Applicant sent [CBC (1993), CBC (1994); BBC (1994)] to the file folder, of which this application is a Divisional. Said videos rebut the Examiner. The Applicant's videos rebut the Office's reliance and dependence upon an older less accurate video (A10-A13,A18; A197,A240,A323-325,A327-330,A339 in the previously submitted Exhibits rendered with Applicant's response). Unlike the older NOVA video, other more recent documentaries -- already supplied to the Office by the

Appellant -- made by reputable production groups such as the Canadian Broadcasting Company [CBC (1993), CBC (1994)] and the British Broadcasting Company [BBC (1994)] have meticulously researched and reported the truth surrounding cold fusion. Scores of individuals in the scientific community have contributed to the latter documentaries, and by doing so declare the Office's flawed opinion on these matters to be wrong. Those references which are cited by the Examiner are not only stale, but should be handicapped by the Examiner because many are in error, and simply did not get it right. In contrast, the references supplied by the Applicant show the present state-of-the-art, including publications by those actually working in the state-of-the-art.

Given the extensive "positive" published results which confirm the generation of products (including excess enthalpy) using isotopic fuel loaded into a material, the applicant therefore respectfully requests that the Examiner reconsider the rejection.

== ERROR BY EXAMINER REGARDING ROUSSEAU

154. The Office has in the past cited Rousseau. This new argument is very flawed. First, as before, the Office again takes selected and older and biased excerpts to attempt to prove its "point". Second, the Office confuses purported "pathological science" with now-documented "pathological skepticism". Third, the authors whom the Office cites do not describe, or respond to, or show, the invention of the present above-entitled application.

Fourth, Dagani admits that [Dagani (1992)] growing numbers of the scientific community do take seriously the "excess heat" of cold fusion [cf. Freedman (Science 4/24/92), Chandler (Boston Globe 4/17/92), Arthur C. Clarke in Discover Magazine 5/1997]. As a result, it has been reported that scientists are **"quite convinced that there is a source of heat"** [e.g. Prof. Philip Morrison as reported in Chandler] and are **"not concerned about the lack of neutrons (expected in a conventional) fusion reaction"** [e.g. Prof. Louis Smullin as reported in Freedman].

Fifth, the United States Patent Office itself has issued patents in this field, and they have been discussed by the very same authors whom the Office cites.

"A bottle no bigger than a man's fist is creating an unusual stir among power generation engineers. The bottle is filled with ordinary water and microscopic palladium coated beads. When a little electric current trickles through the bottle, several hundred times as much power starts coming out in the form of heat - that is, if one cares to believe the instruments attached to the bottle. ... Yet supporters say something is going on inside the little heat producing bottle. As with the Utah apparatus, it's claimed that the bottle produces an excess of power as it electrolyzes, or breaks down, water molecules into hydrogen and oxygen atoms. But unlike the controversial and

unpredictable Utah experiments, The Patterson cell can be turned on and off seemingly at will. Several working devices built by Dr. Patterson have been made available to two teams. "This is the first time what we have a system that seems to work every time," says a nuclear chemist who consults to utilities. The cell's reliability, which would allow scientists to manipulate it, "gives us our first chance to see if this [phenomenon] involves a nuclear reaction," he explains. "Moreover, the U.S. Patent and Trademark Office, which has flatly said that cold fusion, like perpetual motion, is impossible and unpatentable, has issued a patent on the gadget."

[JERRY E. BISHOP, *The Wall Street Journal*,
January 29, 1996, underline added for emphasis]

== ERROR BY EXAMINER REGARDING SILVERIA AND MYERS

155. The Office has in the past cited Silvera and Myers. However, they did not achieve their loading by the method described in the present original specification, and therefore does not apply. Specifically, Silvera (90) used a diamond anvil to attempt to load palladium with deuterons. Although high pressure was obtained, the reaction was monitored by neutron detectors, and neutrons are not the proper signal for these types of reactions, even if they were achieved by the quite different system of Silvera (90). Also, Silvera may have seen a slight increase, as it is difficult to state since there were insufficient initial background levels reported (Fig 3, page 9145, Silvera (90)). Furthermore, the papers states: "The neutron detector had deviations of 0.3 counts/h from the average of 2.1 counts/h., which we did not consider to be significant (bottom column 1, page 9145, Silvera (90)).

Myers et alia (90) used a 10,000 volt ion implantation cryogenic (41 to 81 degrees Kelvin) technique to load palladium with deuterons. Although high pressure was obtained, the these were quite inhomogeneous (see figure 5, page 266, Myers (90)). The reaction was monitored for 15 hours by charged particle detectors. Such detectors may not be the proper signal for these types of reactions (Mallove, also vide supra), even if they were achieved by the quite different system of Myers (90). Also, Myers did see a very slight output consistent with some possible fusion reaction (see figure 1, page 264, Myers (90)) which created 300 counts per channel of tritons. Furthermore, Myers only did this for 15 hours, which is too short (confer Swartz 97E).

Silveria and Myers demonstrates the field is real, and that many would have benefited by the granting of the patent described in the original specification and claims of the above-entitled application.

== ERROR BY EXAMINER REGARDING TAYLOR

156. The Office states,

"In the Taylor et al article (co-authored by Jones), which was submitted to the Fourth International Conf. On Cold Fusion (held Dec. 1993), it is stated in regard to the detection of neutrons from their cold fusion experiments, "The results do not provide compelling evidence of neutron production" (note particularly abstract and pages 6, 7, 9, 10)."

THE TRUTH - THE EXAMINER Errs Because TAYLOR AND JONES DESCRIBE NEUTRON EMISSION

The Office has in the past cited Taylor. Actually, the Taylor article itself describes a possible evidence of neutron emission. There was a 2-sigma deviation in the sample that demonstrated tritium. That "coincidence" is acknowledged in the article, and some of the authors admit that they should have repeated that several more times. The Examiner should read the cited articles, and also confer with the Jones neutron paragraph above. And neutron emission has nothing to do with the preferred embodiment of the present invention.

== ERROR BY EXAMINER REGARDING TAUBES

157. The Office has in the past cited Taubes. Any reference to Journalist Taubes' commentary is wrong, irrelevant, immaterial, and egregious. Taubes focuses on a few mistakes of a few individuals from 1989, and does not reflect either the science or engineering of the field in general today, or the present invention in specific. Taubes (like Huizenga) is a career-"negativist" to this field who makes a living off of his book. However, Taubes is a science reporter and not a scientist. Nor has he been sworn in or proven by the Office to be an expert in these matters as the Applicant has done with the Declarants to date.

First, not only did no alleged tampering take place, but the generation of detected tritium has actually been confirmed elsewhere including in US national laboratories. Furthermore, the dynamics of the tritium which did appear, could probably not have been "spiked" as discussed in Mr. Taubes' unsubstantiated allegations crafted as innuendo to which the Office refers. Both Taubes, and now the Office, owe apologies to all individuals whom they have impugned in this made up story.

Second, the Office's reliance on such a purported dubious incident has **NOTHING TO DO WITH** the original specification of the above-entitled application.

Third, Taubes' book has many frankly silly and stupid errors including claims that researchers in this field do not measure electric current, or baseline levels. The Figures in the original specification of the above-entitled application and the other of the Applicant's inventions and peer-reviewed publications show that this is not true for the present invention.

Fourth, Taubes' book has been severely -- and correctly -- criticized by Miles (92A), also Miles (92B), and Hoffman (94). Also see Mallove.

== ERROR BY EXAMINER REGARDING ZIEGLER

158. The Office has in the past cited Ziegler, Faller, Salamon, and Cooke who purportedly report negative results, while looking for neutrons. However, attention is directed to the fact that Faller did report a tritium increase. Other actually "positive" evidence in the Examiner's art does support the existence of these reactions. From 1989, Shani monitored stimulated neutron radiation from deuterated materials after being neutron-irradiated. However, fusion of isotopic fuel in a material does not usually produce significant numbers of neutrons external to said material. Therefore these so-called putative "negative" results do not negate anything at all. In addition, not all of the art cited by the examiner was "negative" with respect to neutrons. Within the papers cited by the examiner, Shani did in fact monitor stimulated neutron radiation from deuterated materials after said deuterated materials were neutron-irradiated.

SOME ERRORS OF LAW DISCUSSED BY THE EXAMINER

== ERROR BY EXAMINER REGARDING DASH

159. The Examiner states:

"The Board decision in Ex parte Dash, 27 USPO 2d 1481 is considered pertinent here."

THE TRUTH - THE EXAMINER Errs Because Significant Evidence was Submitted

The Examiner has a new argument regarding the Board of Patent Appeals and Interferences in the Dash decision. The Examiner claims the Dash decision says cold fusion does not exist. Then the examiner asserts -- without proving it -- that the Dash case is the same as the present instant case. However, there are several misstatements and logical errors in this new argument.

First, the decision states [Ex parte Dash No.92-3536 (Decided November 24, 1992 Released May 11, 1993)]: "applicants failed to produce any evidence to overcome examiner's position. " [U.S. PTO Board of Patent Appeals & Interferences; Ex parte Dash No. 92-3536 November 24, 1992] **That is not the case here.** More than three hundred references, the supplied Declarations, and the Applicant's published reports in peer-reviewed journals, overcome the Examiner's position, not just because of the quantity of references, but because of the quality. The Declarations alone overcome the Examiner's position if the Examiner actually obeyed the law and the Office's rules.

160. Second, the present invention is neither described by, nor referred to, within Dash, or said Appeal Decision. Dash is simply a different case despite the Office's new argument. As such, the use of the Dash decision is improper.

The amount of evidence required for proof of utility depends on the facts of each individual case [In re Gazave, 54 CCPA 1524, 379 F.2d 973, 154 USPQ 92 (1967); In re Chilowsky, 43 CCPA 775, 229 F.2d 457, 108 USPQ 321 (1956); In re JOLLES, U.S.C.P.A., 1980, 628 F.2d 1322, 206 USPQ 885]. Applicant has provided the Office with those parameters, and previously in a case before the US Supreme Court, the Office was caught being dishonest about voltage, temperature, and other parameters. A copy of that is included with this response so that the Examiner and the Court if necessary can see that this disingenuity is systematic. Applicants data and sterling references consisting of scores of articles taken from peer-reviewed and other scientific and educational journals, all in rebuttal to the Office's misstatements. Appellant's references have been listed on Forms PTO-1449 with the appropriate Petition pursuant to 37 CFR 1.97(d)(1)(ii), and certificate pursuant to 37CFR 1.97(d)(1)(e), appended. Said references, like the submitted un rebutted Declarations are relevant and overcome the opinions of Examiner because of the reasons stated in said Appeal and Reply Briefs.

THE OFFICE HAS BEEN DISINGENUOUS TO THE BOARD

161. The Examiners' disingenuity (after being corrected by Declarations removed, and peer-reviewed papers also removed) is improper and not consistent with the standards of review. By condoning disingenuity by the Examiner on federal documents, and by allowing removal and ignoring submitted Evidence, the Office has been acting in egregious, odious manner. DTRA, DARPA, the US Navy, NASA and other US agencies that now take the Applicant's inventions and the fields in which they also work quite seriously. And yet, to enable transfer of the technology overseas, the Examiner and Office substitute their own fabricated, repeated, systematic disingenuity for the Appellant's (then Applicant's) submitted documents. The literature shows the Office's belief is obstructively, vindictively, wrong. DTRA disagrees with the Office's notion and assessment. DARPA disagrees with the Office's notion and assessment. The US Navy disagrees with the Office's notion and assessment. NASA disagrees with the Office's notion and assessment. Thousands of scientists disagree with the Office's notion and assessment.

Fact 15: The Office Has Been Systematically Disingenuous

162. The Office has a past history, in all other of this group of Applicant's patent applications, of being abusive to Applicant by ignoring arguments, and then disingenuously twisting facts around, required to maintain the illusion. As one example, attention is directed to the Examiner's utterly deceptive, false, misleading statement previously that the present invention involves removing the electrode, when the original above-entitled specification says otherwise.

163. As another example, all meticulous efforts of the pro se Applicant has been ignored. The reason is that the pleadings completely rebutted the Examiner. And so, to this date, the Office has utterly failed again to respond substantively to the arguments or Declarations.

164. There has been no fairness, and no transparency. The Examiner has simply ignored the Applicant's grounded, scientific, Declaration-supported, arguments. The Examiner should have considered and precisely commented upon the Applicant's substantive reply accompanied by the solid evidence already submitted. But he has not. Never. The present Communication simply repeats his previous disingenuous errors.

Fact 16: Declarations Describe the USPTO

165. The Patent Office has acted wrongly. As the Hagelstein Declaration states, **"12. Since the USPTO refuses to recognize the existence of the effect, patents can-not be obtained on the associated technology. Because of this, funding to de-velop the technology is generally unavailable, or very nearly so, which hinders its development. By following its misguided policy in this area, the patent of-fice impedes the development of technology that would address the energy problem, that would impact the availability of fresh water, and that could pro-vide a real solution to the climate change issues the world faces. The devel-opment of this technology could have a real impact on national security, as the instability which results from the current situation regarding the finite avail-ability of oil in less than friendly regions could be mitigated with the new en-ergy source this technology promises. The development of a new energy tech-nology in this area would be expected to provide jobs, which are badly needed at this time."**

166. As the Hagelstein Declaration states,

"13. According to the USPTO website, the mission is described as: The USPTO mission is to ensure that the intellectual property system contributes to a strong global economy, encourages investment in innovation, and fosters entrepre-

neurial spirit. The USPTO promotes industrial and technological progress in the United States and strengthens the national economy by:

"Administering the laws relating to patents and trademarks.

"Advising the Secretary of Commerce, the President of the United States, and the administration on patent, trademark, and copyright protection.

"Advising the Secretary of Commerce, the President of the United States, and the Administration on the trade-related aspects of intellectual property".

In the general area of the Fleischmann-Pons effect, the USPTO accomplishes ex-actly the opposite of its mission. The global economy is faltering, and this technology could make a difference, but is not allowed to do so because of the USPTO. The USPTO hinders industrial and technological progress, since pat-ents generally are not allowed, because there is little or no investments (be-cause intellectual property cannot be protected). In general, the USPTO pre-vents progress through its actions, contrary to its mission statement."

167. The Examiner has acted wrongly in this matter, and has a history of this. The Ahern Declaration states,

"I sympathize with the Applicant, Dr. Mitchell Swartz. I can understand his frustration with one USPTO examiner, namely, Mr. Palabrica, who was an ex-aminer for my filing of a patent application on an invention involving high en-ergy density discharges and their intensification by high voltage pulses in liq-uids. For this invention, I drew on the vast experience of decades of exploding wire experiments and other high energy density studies. I based the invention on the same principle that is routinely observed in femtosecond laser-matter in-teractions. This invention was useful because energy could be extracted. My patent application was taken by Mr. Ricardo Palabrica."

"The Examiner Mr. Palabrica denied my application and dismissed all of my claims on the grounds that he deemed that it was "cold fusion". My technology, my scientific explanations, and my arguments were summarily essentially ig-nored and dismissed by Mr. Palabrica, as he appeared to have pre-judged my technology and invention as part of the 'cold fusion' phenomenon. It was not. I did not even used those words. I did not even use the word "fusion" in my filing. I did use the metal palladium and heavy water, but the similarities ended there."

168. As with this present invention, Mr. Palabrica has demanded changes and then claimed "new material". This is wrong. The Ahern Declaration states,

"In discussions, Mr. Palabrica implied that if I removed all references to palla-dium and heavy water that a successive patent application would be allowed. Mr. Palabrica said that a new filing without the words 'fusion', 'palladium' and 'heavy water' would have a much better chance of moving

forward. This was an odd request by Mr. Palabrica because to compliance to his demand would have made a second filing useless by removing the very materials used. Be-cause Mr. Palabrica apparently has the power to decide what an inventor's tech-nology would be, I gave up in frustration even though I believed, and continue to believe, that the technology was sound. "

"I am the inventor of over 20 patents, and have never experienced such a re-sponse from any Examiner before, like I have from Mr. Palabrica. Mr. Palab-rica's response was inappropriate for a Patent Examiner. The comments in-volve attempting to change an invention by overstepping his directives and act-ing as a 'protector' of scientific knowledge."

"The Applicant, Dr. Mitchell Swartz appears to be laboring under the same mis-use of authority.

Fact 17: The Office Has Systematically Ignored Exhibits and Operability

169. The Office has not been honest even AFTER description of the invention was published by peer-review by the American Nuclear Society, and described by (unrebutted) Declarants. The Applicant undertook the full burden coming forward with Evidence as required [In re Oetiker, 977 F.2d at 1445, 24 USPQ2d at 1444]. Significant, detailed, precise, specific, substantive arguments and Evidence of record were submitted by the Applicant to show that the Examiner was incorrect, and to support that the invention does operate as indicated with Applicant. At the US Patent Office, the submitted Evidence was removed/ignored/or destroyed (as it has been, over and over, *vide supra*, *vide infra*, by the Office) and the invention misdescribed (as it has been over and over by the Office).

Fact 18: The Office Has Been Contemptuous of the Board

170. The Office has been contemptuous of the Board several ways. First, there has been serial disingenuity.

Second, the Office has had the Board "rubberstamp" its disingenuity for discriminatory and egregious purposes.

Third, there has been withholding of documents.

Fourth, the Board made the Applicant's patent application "Special" and it was thereafter targetted, dissected, and absolutely obstructed.

Fact 19: The Office Has Been Contemptuous of the Board Order

171. The Examiner is wrong because the declarations were all ignored going back to '937 and '480 with Dr. Palabrica. The Office did not provide any serious, precise, honest reason --not one-- to doubt the objective truth of any of the Declarants'

statements relied on for enabling support. The Examiner attempted to throw the application out rather than answer the Applicant's arguments, and he still (even after repeated corrections) refuses to describe the invention correctly. The Applicant appealed to the Board of Patent Appeals and Interferences (Appeal No. 94-2921). The Examiner was disingenuous to the Board claiming there was "new matter" and that "excess energy" was involved. The Office was disingenuous about the present invention. It was never true as the Office claimed that the Applicant claimed or discussed "excess heat". Those words were never in the original specification and claims. In addition, the Office ignored everything the Applicant sent and then disingenuously claimed that the Applicant failed to respond.

172. In addition, attention is directed to the fact that both the Office's allegations of purported "new matter" and "excess energy" were both false. "Deuterons" were not new material but were mentioned within the entire original specification and claims. Second, the Patent Office and Examiner's false rantings led to the phrase "excess energy" being mentioned, if memory serves, 37 times in the Board's Decision, when the phrase was never even used, not once, in the original specification and claims. The notion arose from the Examiner's endless linking of the invention to Fleischman and Pons.

173. The Board Ordered, with authority pursuant MPEP §1211, and explicitly required a response to address the cited relevant Declarations regarding material matters of fact (operability and utility). Said remand stated, "Further, the examiner should explain why these 'filings' and 'references' are inadequate in evidentiary weight, to overcome the evidence proffered by the examiner."

174. The Office Ignored Orders from the Board. The failure of the Office to substantively and precisely reply to the Board's Order for a response to the relevant Declarations is a matter of fact. The Examiner remains in contempt. The Order of remand stated,

- "Further, the examiner should explain why these 'filings' and 'references' are inadequate in evidentiary weight, to overcome the evidence proffered by the examiner."
- That remains as true today, as it does then. The Examiner, unsworn, impugns scores of Declarants who have sworn the affidavits.

**UNDISPUTED INCONVENIENT FACT: Evidence Withheld from Docket,
Board and court by Office**

175. What was revealed in '970, previously before Board of Patent Appeals and the US federal court, is that the Office's "docket" was inaccurate in several ways. The Office was (and had been) disingenuous about Evidence. When a *duces tecums* was delivered to the USPTO's counsel in the federal appellate court, it was revealed that some of the Declarations were egregiously hidden from the Board. The Evidence finally appeared in the federal appellate court (where the present Amicus Briefs and Declarations were not available because of protest by the Examiner and the lawyer for the US PTO) that some of the Declarations were egregiously hidden from the Board and the federal court.

The findings by *Duces tecums* on subpoena are serious (as is the present false statement by Mr. Keith) because Evidentiary materials were withheld, and/or removed. The exposure demonstrated that the Office had failed to log in or consider all the relevant submitted Declarations - despite a previously ignored Remand by the Board to do just that. Only as a result of discovery in federal appellate court were the following discovered: The Office's "docket" given to the Board was inaccurate in several ways. The Office's "docket" was not timely recorded by the Office.

176. It was revealed ONLY AFTER the Board's Decision (In re Swartz) that not all the pleadings and Declarations were actually logged into the record.

It was revealed ONLY AFTER the Board's Decision (In re Swartz) that as many as six (6) pleadings of, or communications by, the Office were not sent to the Appellant.

It was revealed ONLY AFTER the Board's Decision (In re Swartz) that thirty seven (37) of Appellant's pleadings and Declarations were not recorded.

It was revealed ONLY AFTER the Board's Decision (In re Swartz) that seven (7) of the Office's entries were out of order, indicating that the purported "Docket" was not made contemporaneously.

It was revealed ONLY AFTER the Board's Decision (In re Swartz) that pleadings and Declarations were "misplaced" by not recording them.

It was revealed ONLY AFTER the Board's Decision (In re Swartz) that some Declarations were incorrectly listed as "letters", and nearly a score of pleadings listed out-of-order temporally [and even later labeled with half-"1/2"-numbers], these pleadings and several Declarations all reached the Office as proven by the stamp of the US Patent Office. The Declarations entered late were given "half" numbers to fit them in.

177. On December 28, 2000, Appellant filed a Continuation of '970, entitled Serial no. 09/ 750,765 [Filed: 12/28/00].

In addition, on January, 18, 2001, Appellant filed a Petition for Certiorari (*) to the Supreme Court of the United States (00-1191) and a Request for Consideration (*) - under violations of United States Constitution [Article I, Section 8, Clause 8, Article III, Article IV, and the Fifth and Fourteenth Amendments.

What was exposed, resulting in said Request for Consideration and said Petition for Certiorari to the Supreme Court of the United States was that the Office had failed to log in or consider all the relevant submitted Declarations - despite a previous ignored Remand by the Board to do just that. So, following the revelations that someone in the Office had 'doctored' federal documents (**), the US Patent Office defaulted (ie. failed to answer). The Office failed to Respond in the Supreme Court (twice; ***).

178. (**) - Corroborating the above, in '937, another case previously before Board, the same co-conspirators wrongly removed Declarations from that file folder which was only exposed through the same federal court proceedings --- AFTER the Board of Patent Appeals commented. This is probably why the Examiner and Mr. Keith have worked to prevent Appellant's Appeal Briefs from reaching the Board of Patent Appeal. These unlawful actions are now -- given the Agreement by the Board of Patent Appeals (February 22, 2011) -- about to precipitate several federal lawsuits, and upcoming Congressional investigations, which otherwise might be unnecessary in the absence of the present false statement in the present "Notice of Abandonment (when there was none)". In '937, the Office was also disingenuous to the Board claiming there was "excess energy" was involved. Those words were never in the original specification and claims. It was never true as the Office claimed that the Applicant claimed or discussed "excess heat". The Board of Patent Appeals and Interferences "rubberstamped" the Examiner's false argument, and it was mentioned dozens of times in the Board's Decision, yet the phrase, "excess heat" was never even used, not once, in the original specification and claims. In '937, the Office's "docket" given to the Board was inaccurate in several ways. The Office's "docket" was not timely recorded by the Office. Forty-three (43) of the timely-submitted pleadings, Declarations, and letters sent by the Appellant were not even recorded. Several of the timely-submitted sworn Declarations were incorrectly listed as "letters". Nearly twenty pleadings were listed out-of-order (showing they were not timely recorded), and only later inked in with half-numbers [e.g. "1/2"]. Specifically, the Declarations were entered late after the case left the Board. The docket was doctored to give the appearance of nothing having been submitted. In '937, as in '970, no explanation was given for the eighteen (18) Office's entries out-of-order temporally, indicating that the purported "Docket" was not made contemporaneously --- and in defiance of the Office's date stamps --- and in violation of 18 U.S.C. 2071.

179. (***) - Why did the Patent Office refuse to respond to the Appellant's Petition for Certiorari (00-1191)? It was the USPTO's first time in history to have defaulted. It is probably because it became clear that the Office had failed to log all the relevant submitted Declarations. Furthermore, it became clear that the Office had corrupted the record and then

misled the Board and then the Court mischaracterizing the above-entitled invention by claiming there was "excess heat" when it was never even mentioned in the original specification and claims. Also, because newly discovered Evidence including the SAW Memorandum has revealed that the Examiner and his group Art have acted in conspiratorial behavior encouraging systematic violations of 18 U.S.C. §1001. - By contrast, the U.S. Supreme Court has ruled that any pro se litigant is entitled to less stringent standards [U.S. Rep volume 404, pages 520-521 (1972)].

180. According to the clerk at the US Supreme Court, this was "the first time in history the USPTO (had) ever defaulted". The implication is: "*Fatetur facinus qui judicium fugit.*"

181. No explanation was given for egregious irregularities, or the Office's entries out-of-order temporally, indicating that the purported "Docket" was not made contemporaneously --- and in defiance of the Office's date stamps --- and in violation of 18 U.S.C. 2071. Instead, to the present date, the Office -- under Mr. Keith and other co-conspirators -- has continued to be disingenuous PRECISELY BECAUSE it was revealed that not all the pleadings and Declarations were logged into the record. They refuse to all the case to mature to the Board of Patent Appeal.

Fact 20: In '937, The Office Removed Evidence from Folder, Withheld from Board and court by Office

182. In other applications of the Applicant, someone also removed Evidentiary documents. In its Decision regarding 00-1107, on 11/8/00, the Court of Appeals affirmed the Board's decision for putative lack of enablement under 35 U.S.C. § 112, ¶1, and indefiniteness under 35 U.S.C. §112, ¶2 saying that the Applicant has failed to respond. The federal court stated that "Mr. (sic) Swartz made no substantive arguments addressing the examiner's rejection. ... Mr. (sic) Swartz presented no substantive arguments." [Decision 00-1107, 11/8/00]. The Declarations and peer-reviewed papers, as with '457, were egregiously removed surrepticiously by the Office. Despite the fact that the Applicant provided substantive rebuttal evidence [In re Marzocchi] including Declarations by those skilled-in-the-art, supported by peer-reviewed published papers, the Office removed the Evidence.

183. The Office continued to be disingenuous until the moment in US federal appellate court that it was revealed that not all the pleadings and Declarations were logged into the record. Some of the Declarations were egregiously hidden from the Board and the federal court. They were "misplaced" by not recording them. What was exposed was that some Declarations were incorrectly listed as "letters", and nearly a

score of pleadings listed out-of-order temporally [and even later labeled with half-"1/2"-numbers], these pleadings and several Declarations all reached the Office as proven by the stamp of the US Patent Office. The Declarations entered late were given "half" numbers to fit them in.

184. As a result, there was a Petition for Certiorari to the Supreme Court of the United States (00-1191) and a Request for Consideration. What was exposed, resulting in the Request for Consideration and the Petition for Certiorari to the Supreme Court of the United States (00-1191) was that the Office had failed to log in or consider all the relevant submitted Declarations - despite a previous ignored Remand by the Board to do just that. So, following the revelations that someone in the Office had 'doctored' federal documents, the US Patent Office defaulted (ie. failed to answer). The Office failed to Respond in the Supreme Court (twice). According to the clerk at the US Supreme Court, this was the first time in history they had ever defaulted.

"Fatetur facinus qui iudicium fugit."

BACKGROUND: The Office Was Disingenuous in Applicant's Inventions in Associated Cases

Fact 21 -In '457, the Office Was Grossly Disingenuous and Destroyed Submitted Evidence

185. The Examiner has brought up the Board of Patent Appeals in '457, and therefore the entire matter is relevant including when the Office has been disingenuous to the federal court. The Office achieved the Decision in '457 by a combination of fraud, contempt, and deception by the Office. The Office achieved the Decision by fraud, the "tip of the iceberg" of which was revealed in the federal appellate court. In the past, in '457, also a novel calorimeter (a heat-measuring instrument) and a "method to ... characterize (a) sample", the invention was NEVER discussed. The Office ignored the evidence, ignored the invention, and removed Evidence from the file folder.

186. In 457, the Office ignored Evidence including submitted relevant, peer-reviewed papers and Declarations. In 457, the Office achieved the Decision by deception involving disingenuity, disrespect of Applicant's Declarants, and misdirecting the Board and Court by hiding, removing, and destroying peer-reviewed publications and Declarations. Applicant's peer-reviewed publications, especially Swartz. M., 1997, Fusion Technology, 31, 63-74 ["Swartz(97)"] prove that the present invention was operable at the time it was filed, and demonstrate validation, and fully address all matters criticized by the Office- which may explain why they are ignored by the Examiner now, and removed from the file folder previously. In Applicant's application '457, Applicant submitted Swartz(97) to the Office eleven (11) times, but it was substantively ignored and repeatedly removed from the file. Documenting this further, the egregious Decision (simply rubberstamping false statements from the Examiner) referred to "cold fusion" eighty-six (86) times. But the truth is that the words which defined '457 and '058, like "thermal output", "thermally monitoring", "electric power drive", "optimum drive condition", and "multiring calorimeter" were never even used once, not one time, in the Decision.

In 457, the Office ignored Evidence. The Office ignored Evidence including submitted relevant, peer-reviewed papers and Declarations. The Evidence --including the Declarations-- demonstrated validation, operability, and utility as taught in the original specification and claims. They also demonstrated quality control and quality assurance necessary for validation and operability.

In 457, the Office "led away" from the present invention using cloth cut of other art.

In 457, obstruction of justice involving "lost", missing, and/or destroyed Federal documents under the watch of the Office (and now the Board) is confirmed several ways.

It is odious that after receipt of so much evidence, that after receipt of more than a dozen copies of the key document, that the Evidence was never discussed.

187. Attention is directed to the fact that, in this case, Examiner has also ignored the salient implication of the USPTO failing to respond to the Petition for Certiorari after it was exposed that some in the USPTO had been altering Evidence and withholding it from the Board and court (see below).

Fact 22: In '457, The Office's Witnesses "Turned" On the Office

1889. In '457, the Office's previous witnesses reject the Office's notions. Their testimony was removed by the Examiner with the appearance of impropriety. Here are some examples. Dr. Rehn, United States Navy, turned on the Office and said:

"Perhaps the clearest scientific fact, at this time, is the hardest for physicists to accept: nuclear reactions apparently do occur in deuterium-loaded Pd, Ti, and probably in other solids."

[Rehn, V., Ahmad, I., "The Third International Conference on Cold Fusion", Scientific Information Bulletin, Office of Naval Research Asian Office, NAVSO P-3580, Vol. 18, Jan. 1993; underline added for emphasis]

189. The Office's previous witness, Dr. Will, rebutted the USPTO and said:

"Significant positive results have been obtained in each of these laboratories. ... Over 100 groups from more than 12 countries have now reported ... " [F. Will; Final Report National Cold Fusion Inst.(1991)]

190. The Office's witness, Dr. Michael Schaffer (cited in the Exhibit supplied with the rejection) rebutted the USPTO and said:

"I do not see how anyone could construe anything that I wrote at Scientific American's site to imply that there is "no utility" in cold fusion, much less in instruments that might be used in cold fusion and other scientific experiments."

"It appears that the Board of Patent Appeals considers me an expert on this subject. As an expert ... I would agree [Dr. Swartz's invention] ... does does have utility" [Letter of Michael J. Schaffer (8/7/2001)]

191. The Office's witness, Jed Rothwell (cited in the rejection out of context) rebutted the USPTO and said:

"None of my statements referred to the functionality, operability or performance of Dr. Swartz's multiring calorimeter. Nothing I have published or heard from scientists casts doubt on the claimed capabilities of Dr. Swartz's invention. In fact, at the Conference reviewed in the article, I interviewed many people and some scientists, such as Dr. Michael McKubre, were enthusiastic about Dr. Swartz's device. Therefore I stated that it may well be a "superb research tool" in the article quoted. It is apparent that the judges of the rejection have standards that are ludicrous and unscientific."
[Declaration of Jed Rothwell (8//2001)]

192. Corroborating the above, Dr. Eugene F. Mallove has said:

"The activity of a sample is an important issue and its measurement has great utility. ... in measuring both endothermic and exothermic chemical and chemical-like reactions, ... The invention does not require the reproducibility of cold fusion phenomena, such as excess heat, to be secure,

"... Rothwell actually praises (the present invention) ... when he says, "This could be a superb research tool..."

" [Declaration of Dr. Eugene F. Mallove (8/2001)]

193. Corroborating the above, Dr. Scott R. Chubb has said:

"the patent office (PTO) has ignored the facts involving the present invention, ... The patent application provides a well-defined procedure, understandable by anyone skilled in the art, that can be used to implement the invention. ... It is evident that the patent office has become recalcitrant, with its opinion in contradiction to existing evidence as promulgated through peer-reviewed literature."

"Dr. Swartz has invented an important, new device, whose purpose has value for measuring activity of a sample. ... I assert that the PTO has failed to distinguish between the very different sets of claims associated with measurements of high energy particles and those involving excess heat."
[Declaration of Dr. Scott R. Chubb (8/2001)]

194. Corroborating the above, Dr. Hal Fox has said:

"It is my professional judgment that the method of measuring the activity of sample in the above-entitled action is clever, not obvious, and is an important invention with utility. ... The rejection has ignored numerous filings delivered to the Patent Office by Dr. Swartz and others. ... It is not credible that hundreds of scientists and inventors are all mistaken in their experiments and data, or that only the patent examiners are sufficiently educated to point out the faults of these inventions." [Declaration of Dr. Hal Fox (8/2001)]

These Declarations indicate that the measurement of activity has utility, and the precise invention has operability. The Office corruptly ignored the testimony.

Fact 23: In '457, The Office Ignored and Removed Declarations

195. Utility is a fact question [RAYTHEON COMPANY v. ROPER CORPORATION, U.S.C.A., Federal Circuit, 1983, 724 F.2d 951, 220 USPQ 592], and therefore Declarations were supplied which demonstrated proof of utility. Because proof of utility is sufficient if it is convincing to one of ordinary skill in the art [In re Irons, 52 CCPA 938, 340 F.2d 974, 144 USPQ 351 (1965)], the Declarations of Dana Rotegard, Mr. Fox, Dr. Swartz, Dr. Mallove, and the letters of Dr. Kurzweil and Dr. Ahern, were submitted including on March 12, 1997, and June 28, 1997. Applicant discussed said Declarations in the Responses to the Examiner. Said Declarations were received by the Office and have been systematically ignored.

196. In '457, the Declarations fully addressed all matters criticized by the Office regarding operability and utility, substantially and fully. Several Affiants even described the week long open demonstrations of Applicant's technology at the Massachusetts Institute of Technology in the Electrical Engineering building in August 2003 during ICCF-10. They confirmed the above-entitled invention's operability, definiteness and utility consistent with requirements [In re Gazave, 379 F.2d 973, 978, 154 USPQ 92, 96 (CCPA 1967); In re Chilowsky, 229 F.2d 457, 462, 108 USPQ 321, 325 (CCPA 1956); In Re Jolles, 628 F.2d 1322, 206 USPQ 885 (CCPA 1980)].

197. Said Declarations were ignored in the their factual content because they refuted the Offices' erroneous position. Said Declarations proved that the present claimed invention measures activity and meets at least one stated objective, and therefore utility under 101 is clearly shown [Standard Oil Co. (Indiana) v. Montedison, S.P.A., 664 F.2d 356, 375, 212 USPQ 327, 344 (3rd Cir. 1981), cert. denied, 456 U.S. 915, 102 S.Ct. 1769, 72 L.Ed.2d 174 (1982); E.I. du Pont de Nemours & Co. v. Berkley & Co., 620 F.2d 1247, 1258 n. 10, 1260 n. 17, 205 USPQ 1, 8 n. 10, 10 n. 17 (8th Cir.1980); Krantz and Croix v. Olin, 148 USPQ 659, 661-62 (CCPA 1966); Chisum on Patents, 4.04[4] [1983]; RAYTHEON COMPANY v. ROPER CORPORATION, U.S.C.A., Federal Circuit, 1983, 724 F.2d 951, 220 USPQ 592].

198. Validation occurs when scientists skilled in the state of the art states it is so. In the international community, Dr. McKubre is among the most highly regarded of those skilled in the art. Dr. McKubre stated:

"For me ... perhaps the best report at this conference, was that of Mitch Swartz. ... I have always felt that the quality of the calorimetric observations in the nickel light water studies has been less than the quality of the calorimetric observations in the palladium-deuterium system. ... Mitch Swartz presented a very clear piece of calorimetric evidence which is

certainly going to cause me to reconsider my belief and understanding of the nickel-light water system and its capacity to produce anomalous heat" [Dr. Michael McKubre, SRI, at his closing "Summary During ICCF-7", Infinite Energy, 4, 20 , pp. 34-35, (1998)]

Fact 24: In '457, The Office Also Destroyed/Removed/Ignored Submitted A Peer-reviewed Publication

199. In '457, the Applicant has published his invention for measurement of activity in a peer-reviewed journal run by the American Nuclear Society. The title is "Consistency of the Biphasic Nature of Excess Enthalpy in Solid State Anomalous Phenomena with the Quasi-1-Dimensional Model of Isotope Loading into a Material" Fusion Technology, 31, 63-74, 1997. The paper confirms operability as taught years earlier in the original specification and claims, and proves that the teachings in the original specification and claims were correct at the time of the filing of the original specification and claims. Therefore, enablement and validation are demonstrated by it. At the time of filing of '457, the inventor came forward with solid substantial, timely, evidence of operativeness and utility, confirmed by peer-reviewed publication ["Swartz(97)" meaning: Fusion Technology, 31, 63-74, 1997]. Applicant submitted a copy of said publication to the Office as Evidence because it demonstrated that growing numbers of the scientific community consider the positive results of Appellant's work as being operative. That includes the American Nuclear Society and the American Chemical Society. This paper was listed on Forms PTO-1440 as appropriate. This publication proves the Applicant was correct, and the invention was correctly taught in the original specification and claims on the filing date of the application [In re Hogan, 559 F.2d 595, 60S, 194 USPQ 527, 537 (CCPA 1977)].

200. In an unbiased venue, such peer-reviewed publications (like the timely submitted Declarations) establish facts. Therefore, such Evidence consisting of published peer-reviewed scientific articles which prove Applicant was correct on the filing date of the application, should have already met the bar of enablement [In re Hogan, 559 F.2d 595, 60S, 194 USPQ 527, 537 (CCPA 1977)]. However, in the above-entitled application, in '457, this paper was NEVER even recorded nor addressed. Instead, it was removed from the file folder, over and over and over and over.

201. The peer-reviewed publication ["Swartz(97)" meaning: Fusion Technology, 31, 63-74, 1997] was received, and it was ignored PRECISELY because it demonstrates validation, operability, and utility as taught in the original specification and claims. According to Examiner Wasil, the first copy of the paper was "missing";

removed on his watch. Examiner Wasil informed the Applicant during a telephone call. Therefore, on March 12, 1997, Applicant replaced it (with a copy of the final published paper), discussed it in the Response to the Examiner [pages 50 and 51], and included it on Form 1440. On May 26, 1997, Applicant replaced it again with another a copy of the final published paper), discussed it in the Response to the Examiner [pages 2 and 3], and included it on Form 1440. On November 8, 1997, Applicant (previously Applicant) sent further copies to the Board, and discussed it in the Appeal Brief [including on pages 47 and 57]. Applicant discussed by letter to Examiner Wasil the injustice of the latest missing copy. On June 25, 1998, Applicant sent the eighth, ninth, and tenth copies of the final published paper to the Board, with a copy in each copy of the Reply Brief.

202. Attention of the Board is, and if myopic then the court, the Congressional investigators, and grand juries are, directed to the following simple facts:

A. The relevant peer-reviewed articles demonstrating enablement [e.g. Swartz. M., 1997, Fusion Technology, 31, 63-74] were sent to the office many times. These copies include prepublication drafts and multiple copies of the final printed article. In '457, Applicant provided the Office with this sterling, important reference eleven (11) times. Receipt of this article, over and over, is documented by the integrity of the dates-tamps and post office of the Patent Office.

B. After submitting such relevant, specific, peer-reviewed papers and Declarations, the burden shifts back to the Office and can only be discharged by the Examiner "presenting evidence or reasons why persons skilled-in-the-art would not recognize in the disclosure a description of the invention defined by the claims" [Wertheim, 541 F.2d at 263, 191 USPQ at 97].

C. In response, said article [Swartz. M., 1997, Fusion Technology, 31, 63-74] was never listed nor ever mentioned in the Office's '457 rejection even though it is on several Forms 1440 of the record, and was then discussed copiously in the Responses to the Examiner [pages 50 and 51 of the 3/12/97 Response, Pages 2 and 3 in the 5/26/97 Response, for example], and even in the Appeal Brief [including on pages 47 and 57]. Swartz (97) was neither listed on the Office's first Docket (A3) nor on the Office's revised "second Docket" (A6), nor was it even listed --let alone substantively addressed-- in the Decision which began the Appeal (Appendix C).